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ABSTRACT

Despite evidence that levels of social support can affect health, there has been little work isolating the factors which actually mediate the relationship between social support and health. In an attempt to analyze the role of nutrition as a mediating factor of health and social support among the elderly, female older adults (N=43) responded to an interview schedule and a social relationship questionnaire and participated in an assessment of nutritive intake. Data analyses indicated that none of the social support variables were related to nutrition variables. However, certain support variables such as having a confidante and spending time with that individual were related to health status and life satisfaction. These findings indicate the complexity of social support and imply that emotional support and problem solving are not necessarily associated with health and life satisfaction. (AG)

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Perceived social support, social interaction and nutrition among the elderly

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Considerable research has suggested that social ties and relationships play a role in determining individual health. People who are married have lower morbidity and mortality rates than those who are single, widowed, or divorced. For example, Kraus and Lilienfeld (1959) compared death rates of several nonmarried groups to those of a married group. They found high ratios of mortality for nonmarried as compared to married individuals. Berkman and Syme (1979) found that more intimate social and community ties, such as marriage and contact with friends and relatives, were stronger predictors of lower mortality than the weaker ties of church and group membership. Further evidence supporting the importance of social relationships for health is the finding that individuals undergoing rapid social or cultural change as well as those living in situations characterized by social disorganization appear to be at risk of acquiring disease (Antonovsky 1967; Cassel and Tyroler 1961; James and Kleinbaum 1976; Syme and Hyman 1964; Tyroler and Cassel 1964).

Despite the evidence that levels of social support can affect health, there is little work on the isolation of factors which actually mediate the relationship between social support and health. The location and examination of such factors is an important step in understanding how social support operates and developing intervention strategies to improve health.

One population that support strategies could impact upon is the elderly. Because they are an at-risk group, the elderly are an important group to study. Towsend (1957) conducted a cross-sectional study of the social adjustment of older people. Although he had no mortality data to verify his suggestions, he was impressed with the effect retirement, social isolation, and social desolation had on the life expectancy of his elderly

sample. Casler (1970) and Engel (1971) also argue that relocation and death of a significant other are predictors of mortality in the elderly.

The purpose of this research is to analyze the role of nutrition as a factor mediating the relation of health and social support among the elderly. One explanation for the mechanism by which support interaction can have such dramatic effects on health is that the unaffiliated are less motivated to eat and consume less nutritious foods than do the affiliated. If social support is associated with nutrition, it is important to discover what aspects of support seem to produce the greatest impact. A second purpose of the study is to further explore the construct of social support. Several recent reviews have suggested that support variables cannot be thought of as interchangeable (Heller & Swindle, in press).

Methods

Subjects

A sample of fifty elderly patrons of two city nutrition sites were asked to volunteer for the study. Forty-three females and seven males participated. Due to the small number of males who participated in the study, analyses were conducted on female subjects only. Subjects were paid for their participation in the interviews and for completing questionnaires which were read to them.

Apparatus

Volunteers responded to an Interview Schedule and a Social Relationship Questionnaire. Assessment of nutritive intake was completed according to the U. S. RDA guidelines as set by the NRC-NAS. All interviews were taped. Observations of subject eating time were recorded by an ordinary watch and paper-and-pencil checklist sheets. Observations of food intake at the nutrition sites were recorded on data sheets.

Procedure

All fifty subjects were interviewed individually and presented with questionnaires. Each was given a brief introduction and rationale to the study. Subjects were informed that they would be paid for their participation. After rapport was established, the Interview Schedule and the Social Relationship Questionnaire were administered. Subjects were thanked, paid for their involvement, and debriefed. After all fifty sessions were conducted, observations were made of amount of food eaten and length of social interaction during the meals at the city nutrition sites. One researcher recorded length of interaction as another researcher took paper-and-pencil measures of the amount of food consumed. This was done according to percentage of food eaten. Finally, the Procidano and Heller (in press) Perceived Support Scales were administered to the subjects at the city nutrition sites.

Results

Pearson product-moment correlations for pairs of variables and multiple regression among variables were applied to the social support and nutrition measures to test for a relationship between social support and nutrition. No significant relationship was found for the main hypothesis. None of the social support variables were related significantly to the nutrition variables.

Insert Table 1 about here.

However, certain individual support variables were related to health status and life satisfaction. Having a confidante and spending time with that individual were associated with subjects reporting higher life satisfaction and better health. On the other hand, having a large network was

associated with lower life satisfaction.

Insert Table 2 about here.

To determine the relationships among dimensions of social support, a factor analysis was performed. The analysis showed four interpretable factors. The first factor accounting for 47% of the variance consisted of network functions such as emotional support and problem solving support provided by network members and the proportion of multiplex relationships within that network. Although more difficult to interpret, the second factor appears to be concerned with network size. Consisting of 19% of the variance, the factor includes the variables of the total number of people in the network and the proportion of intimacy in the network. The amount of time visiting with relatives loads negatively on this factor and may indicate that individuals with large networks spend less time proportionately with their relatives. Factor three accounting for 14% of the variance consists exclusively of the Procidano and Heller Perceived Support Scales. The fourth factor accounting for 12% of the variance consists of the density of the network and time spent with confidantes loading in a positive direction, and time spent on church activities loading in a negative direction. Thus it would appear that individuals who have dense networks or who spend more time with special friends proportionately spend less time with church activities.

Multiple regression analyses were performed to determine whether any of the social support variables or factors predicted the dependent variables of life satisfaction, meal satisfaction at home, health, or nutrition. None of the support variables or factors were significantly related separately or in combination to any of the nutrition variables. The only

social support variables that were separately related to life satisfaction, health, and meal satisfaction at home were the presence of a confidante and spending time with that individual.

Discussion

The results of this study did not support the expected relationship between social support and nutrition. The failure to obtain the expected finding might be due to the lack of variability in the subjects' nutritional intake and other homogeneous characteristics of the subjects. As a group, subjects exceeded RDA requirements in all nutrients examined with small deviations about the means. They all obtained the same noon meal which was a significant part of daily intake. All subjects were ambulatory, and as a group, fairly healthy. In addition, the nutrition sites offered social activities as well as meals, and may have been providing opportunities for support that would otherwise have been absent.

The multiple regression analyses where meal satisfaction at home and life satisfaction were dependent variables did suggest some interesting findings. At least one social support variable did predict both. It seems that having a confidante and spending time with him or her is associated with subjects reporting a more positive outlook on life and greater satisfaction with meals. Yet other components of support such as network structures and functions failed to do so. The significance of having a confidante replicates Lowenthal and Haven's finding concerning the importance of a confidante for the morale of the elderly.

Consideration of these findings indicate the complexity of social support and confirm that an accurate delineation of what support is and how support operates is a difficult task. It seems that one cannot simply describe social support in terms of structural variables. For example, the

size of one's network and the measure of its density are not related to health or to life satisfaction. One cannot describe support strictly in quantitative terms. Another implication of this study is that the quality of support does not necessarily involve specific functions. Emotional support and problem solving support are not associated with health and life satisfaction. Therefore, although having a confidante is associated with better health, health status is not attributed to specific functions the confidante provides.

What remains to be demonstrated and replicated is an accurate explanation of what a confidante is and what he or she does.

Table 1

Pearson Product-Moment Correlations for
Social Support and Nutrition Variables

	Social Support						
Nutrition	Network Size	Density	Prop Companionship	Prop Problem Solving	Prop Emotional	Confidante	Time w/ Confidante
Protein	-.053	-.094	-.063	.104	.006	.165	.128
	(.740)	(.554)	(.691)	(.511)	(.971)	(.290)	(.412)
Vitamin A	.059	-.197	-.073	.026	.038	.168	.182
	(.710)	(.211)	(.647)	(.868)	(.810)	(.283)	(.242)
Vitamin C	.219	-.283	-.322*	-.152	-.098	.234	.240
	(.163)	(.070)	(.037)	(.337)	(.537)	(.132)	(.122)
Iron	.193	-.065	.042	.158	.113	-.168	-.113
	(.222)	(.682)	(.788)	(.317)	(.477)	(.283)	(.470)

Note. Probability levels for all tests of significance, $p < .05$.
Probability levels for each correlation are presented in parentheses.

[a]The abbreviation, prop, represents proportion.

Table 2

Pearson Product-Moment Correlations for Individual Social Support Life Satisfaction, and Health Variables

Social Support	Life Satisfaction	Recent Illness
Network Size	-.471*	.225
	(.002)	(.151)
Density	.187	.214
	(.236)	(.173)
Proportion Companionship	-.010	.165
	(.948)	(.295)
Proportion Problem Solving	-.147	.217
	(.353)	(.168)
Proportion Emotional	-.220	.288
	(.161)	(.064)
Confidante	.371*	-.381*
	(.014)	(.012)
Time with Confidante	.315*	-.343*
	(.040)	(.025)

Note. Probability levels for all tests of significance, $p < .05$. Probability levels for each correlation are presented in parentheses.

Table 3
Factor Analysis of Social Support Measures

	Factor 1	Factor 2	Factor 3	Factor 4
Network size	.356	.836	.035	-.405
Number of organizations to which s belongs	.211	.355	-.088	.065
Frequency of church attendance	-.124	-.117	-.051	-.812
Number of visits with neighbors	-.143	-.220	.010	.114
Frequency of contact with confidante	-.190	-.263	.030	.518
Frequency of visits with relatives	.004	-.682	-.368	.189
Network density	-.013	.008	-.025	.535
Proportion of multiplex relations	.746	.260	.049	-.050
Prop. emotional support	.872	.146	.207	-.034
Prop. problem solving	.843	.010	.217	.025
Prop. companionship	.385	.276	.251	-.017
Proportion of intimates in network	.048	.645	.091	.128
Perceived soc. su port (Fr)	.082	.020	.858	.003
Perceived soc. support (Fa)	.211	.095	.668	.068

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